UPPER CLARK FORK STEERING COMMITTEE

MINUTES – January 27, 2000

MEMBERS PRESENT:

Gerald Mueller	*Facilitator*	**Jim Dinsmore**	*Granite C.D.*
Bob Benson	*C.F. Pend Oreille Coalition*	**Ole Ueland**	*Mile High C.D.*
Holly Franz	*MT Power Co.*	**Jules Waber**	*Powell County*
John Vanisko	*Deer Lodge Valley C.D.*	**Eugene Manley**	*F.C. & MWRA*
Audrey Aspholm	*Anaconda/Deer Lodge County*	**John Sesso**	*Butte-Silver Bow*
Gary Ingman	*MT DEQ*		

MEMBERS ABSENT:

Steve Schombel	*Trout Unlimited*	**Martha McClain**	*Missoula C.D.*
Liz Smith	*Deer Lodge*	**Rep Doug Mood**	*Seeley Lake*
Robert Orr	*Lewis & Clark C.D.*	**Mike Griffith**	*Lewis & Clark Co.*
Brent Mannix	*N. Powell C.D.*	**Suzy Peraino**	*Rock Creek*
Michael Kennedy	*Missoula County*	**Kathleen Williams**	*FWP*
Robin Bullock	*ARCO*	(For Don Peters)	
Jim Quigley	*Little Blackfoot*		

VISITORS PRESENT:

Joe Bruster		**Ron Burgess**	
Clayton Marlow		**Louie Loveland**	
Susan Sakaye		**Janice Loveland**	
Curt Martin	*DNRC*	**Pat McDonald**	*self*
Martha Kauffman	*MSU-Bozeman*	**Joe Broesder**	*Bandy Ranch*
Tom Pick	*NRCS/DEQ Helena*	**Robert Finck**	*MSU*
Vicki Watson	*U of M*	**Steve Fry**	*Avista*
Shannon Voss	*DNRC*		

The Upper Clark Fork River Basin Steering Committee met Thursday, January 27, 2000 in St. Mary's Center, Deer Lodge, MT.

WELCOME:

Gerald Mueller welcomed Committee members and visitors and called the meeting to order. The agenda for the meeting was as follows:

1. Fred Burr Creek Letter
2. Groundwater Modeling
3. Grazing BMPs and Water Quality
4. State-Avista Negotiation
5. Work Plan

The *Minutes* for the October 6, 1999 meeting were discussed and approved. The *Minutes* for December 7, 1999 were distributed and briefly

reviewed prior to the meeting. They had a few minor corrections. On page one, John Sesso and Jim Quigley were present for the meeting, and Dave Streufert's name was misspelled in the "visitors present" list. On page four, fourth paragraph down, it was asked that "sediment siltation" read "sediment/siltation" and that we put parentheses and add the word "may" halfway through the last sentence of that paragraph so it reads "thermal modifications (that may relate indirectly to dewatering, and finally suspended solids.)"

On page five, Gary wanted to give Roxann the credit of acknowledging the February 17 meeting in Deer Lodge.

On page six, Gary wanted to clarify that the fourth category on the 303d list should read: "d) Impaired water bodies that will be addressed by approaches other than TMDLs."

Also, Gerald wanted to clarify that instead of his comment reading "most of the impaired waterbodies we have listed as impaired will probably come off the list." it should read: "Many of the streams on the list relate to pollution (not pollutants) and would not require TMDLs under the new rule."

ANNOUNCEMENTS:

Gerald passed out the agenda for "The Blackfoot Challenge" forum on February 9 at 7:00 p.m. He also mentioned again that several members of the Steering Committee can no longer attend and need to be replaced. Gerald or Mike McLane will take any recommendations of anyone who you think might be an asset on this committee.

Ole Ueland suggested we get someone representing EPA because they are an important agency.

Bob Benson suggested we invite Wendy Thomi to join the committee.

Ole also wanted to state that Gerald did an outstanding job in his presentation of the Steerng Committee's comments on the draft to the Upper Clark Fork River Basin Remediation and Restoration Education Advisory Council (UCFRBRREAC). Ole asked if we could have a briefing at the next meeting about the status of the NRD remediation program. Gerald mentioned that improved coordination with the NRD effort is one reason to seek out a member of the UCFRBRREAC such as Kathy Hadley to also serve on the Steering Committee.

FRED BURR CREEK:

Gerald began discussing whether or not the Steering Committee should write a letter to EPA concerning Fred Burr Creek. He postponed the discussion until after lunch to accomodate local land owners who planned to attend then.

After lunch, **Gerald** first summarized the status of the situation at Fred Burr Creek, stating that there is an abandoned mill site near this creek which EPA said requires emergency actions. When this mill shut down, it left tailings toxic to aquatic forms of life. Gerald stated that he thought EPA's Griswald wants to try to cap these tailings using "sewage sludge." Some have raised two concerns with this proposal. First is the stability of the hydrologic system. Apparently, when the mill was operating the tailings were placed in the old stream channel, and the Creek was relocated above it. If the repositioned Creek bed overflows, Creek water would again flow through the toxic tailings. Second using "sewage sludge" to cap the tailings may produce a more harmful product than the already present toxic tailings.

Gerald mentioned that at the request of Granite Conservation District, he and representatives of the District met with DEQ Director Mark Simonich to discuss these concerns. Mr. Simonich agreed during the meetng that the Steering Committee and DEQ should jointly write a letter to EPA asking them to please share their plans before they take any actions. The Steering Committee, therefore, should decide whether it wants to send such a letter.

Jim Dinsmore stated that there are upset people around Fred Burr Creek. The general consensus is that this is not an emergency and they are being forced to address this.

Gerald is afraid EPA isn't talking to any of the landowners. He said he only knows of one public meeting that was held which the Steering Committee helped plan. He also stated that there is a lot of anxiety among people when they are not informed.

Jim said that Griswald met with the Conservation District last fall and explained EPA didn't want the public involved in the emergency response.

After lunch, this discussion was continued with a few landowners near Fred Burr Creek. **Ron Burgess** spoke up stating that Griswald never proposed using "sewage sludge" but a processed material they make that is treated and run through all kind of tests so that it is environmentally approved.

Gerald apologized for his misunderstanding but went on to emphasize how EPA needs to explain what they are doing so that these misunderstandings don't arise.

Ron emphasized that the landowners had received letters from the Steering Committee asking if they wanted the committees' help to understand this issue. Ron strongly argued that he speaks for the majority of landowners along Fred Burr and that the Steering Committee is not "invited."

Ron said the landowners want EPA to complete their work before anyone else gets involved. He believes they have as much expertise as anyone else does and that they shouldn't be second-guessed. Any attempt at asking questions or

getting involved would be counter-productive. After EPA is finished, they will want the Committee's help.

******_It was decided that although a letter would be written with the intent to bring understanding to the issue (and not aimed at questioning the EPA's procedure itself) the Committee will not write a letter if that is the landowners' wish._

GROUNDWATER MODELING:

Martha Kauffman recently finished her thesis titled "An Investigation of Ground Water –Surface Water Interaction in the Flint Creek Valley, Granite County, Montana."

Martha's main objectives were to answer the following questions:

1. How close to the stream can a withdrawal occur before it produces important deleterious effects?
2. Are there areas where ground-water withdrawal will likely have no effect on the stream?
3. If such areas exist, how are they recognized and where are they?
4. How do ground-water withdrawals impact surface-water flows?

Her method involved:

1. Creating a calibrated numerical model (which characterizes the interaction between ground water, surface water and irrigation using the data that was collected for the DNRC Flint Creek return flow study.)
2. Asking Questions of the model.

Her study area was Lower Flint Creek Valley (Drummond). The main waterways include Flint Creek, Clark Fork River and Lower Willow Creek.

To develop her model, Martha had to:

1. Develop a conceptual model (a three-dimensional model—this means choosing what the layers are, what they will look like, deciding what they will consist of, and what their parameters are).
2. Establish a range of acceptable values for hydrologic characteristics that will be used during model calibration (before manipulating the model she had to establish the ranges—using scientific information—which she could work within while adjusting the parameters of the model).
3. Develop MODFLOW model
4. Calibrate model—she calibrated to the ground water elevation measurements that Kirk Warren took over a two-year period, and to the stream flow, to a certain extent, that Terry Voeller was measuring.
5. Perform sensitivity analysis—running a series of tests to see what the model is most sensitive to.
6. Verify the model—which is something that if very rarely done and requires an independent set of data.
7. Run stimulations.

Conclusions:

1. A numerical model can be used to quantify basin-wide surface-water/ground-water interaction in the Flint Creek Valley. (She cautioned that the examples she showed provide the conclusions that she has. There are other things that can be queried from this model, and you might come up with different perspectives.)
2. The distance that irrigation wells are placed in Flint Creek determines the timing of impacts on stream flow. Wells placed a quarter mile from Flint Creek reduced stream flow most during the annual low-flow summer months. All wells placed a half mile or farther from the creek most strongly reduced stream flow in the fall.
3. The distance that wells placed on the stream also determines the percent of water drawn from the stream versus from storage. A well placed a quarter mile from the stream drew about half of their water from stream flow while a well three quarters of a mile from the stream drew 10%-20% of their water from stream flow.
4. Valley characteristics also determine impacts of wells on stream flow. A well placed in a narrow section of the valley had a larger impact on stream flow than a well placed in a wider section of the valley.

Appropriate Use of the Model:

It is a regional model helpful in analyzing the general effects of ground-water development in an irrigated alluvial valley. It could be used to explore other scenarios, one might be to find the cumulative effects of multiple large capacity wells on the stream flow. (Martha only pumped from one stream at a time). Another use might be to find the effects of changing from sprinkler irrigation if you change the recharge values, and possibly to determine the long-term effects of groundwater withdrawal for storage on stream flow several years in the future.
This model is not designed to be used for site-specific regulatory decision-making; however, water managers may want to consider the results from this model when pursuing requests for new wells in intermountain alluvial valleys.

Bob Benson asked Martha if you would have to find another basin with pretty much the same features as the Flint Creek to apply the results, or if you would be able to "broad-brush" some of the results?

Martha said she thinks you could broadly apply some of the concepts in terms of size and timing of impacts concerning how the basin is laid out—she thinks most of the basins, at least in western Montana, are similar in geological and depositional history. The problem with models is that they are data-intensive, and if you had to legally justify a decision, you would probably need to use data from a specific basin.

Eugene Manley stated that her assumption in the report of 54 inches of water on an irrigated acre is really low, and also doesn't take into account the ditch loss.

Martha explained that she took into account evaporated losses and a 40% ditch loss. She worked with a professor at MSU and talked with Annette Johnson at NRCS, and also appreciates his input on this.

Gerald asked what affect this would have on her results if she changed this assumption now.

Martha said the impact of changing these numbers would be that more water would be showing up in Flint Creek from the groundwater—there would be more return flow.

She asked the question, "how much water is *actually* getting to groundwater?" She used the net value after accounting for evaporation and transpiration by the plants. She thinks a lot of water is returning to the stream as surface water (through ditches, etc.).

Jim Dinsmore thinks her assumption on water reaching the ground water from sprinkler irrigation is too high.

Martha said that she used a range of 0-8 inches of water actually getting to groundwater. She said it was all based on the *Montana Irrigation Guide* and the kinds of crops she understands to grow there. She said that for flood irrigation, maybe 18 inches over a season might actually make it to groundwater. She said these are the critical numbers and asked if they seemed off to anyone.

Gerald said that DNRC is supposed to permit new groundwater wells. If they are connected to the surface water, they are not supposed to issue the permits. Would this model help or is the scale too large?

Martha said this model would help by looking at the effect of multiple wells, but this requires a lot of time and data to be very specific.

Gerald mentioned that the Bureau of Reclamation is putting together a model, and asked if Martha was aware of it.

Martha replied yes, and explained they are working on a surface water analysis, and have looked at her own work, but said their analysis is in the process right now.

Gerald asked if somebody could use her model if they wanted to.

Martha replied that DNRC owns it since they helped fund it, but that she thinks anyone could ask them to use it.

GRAZING BMP'S AND WATER QUALITY:

Clayton Marlow and Robert Finck, from the Animal Range Sciences Department MSU-Bozeman, gave a presentation on grazing BMP's and water quality.

Clayton explained the state Water Quality Task Force has set forth a series of grazing best management practices to help address pollution coming from grazing lands. The goal of this task force is to eliminate grazing impacts to water quality on private and public grazing lands. These practices had to have the potential to protect water quality by improving streamside vegetation and protect streambanks from trampling. The practices had to be flexible and applied on a voluntary basis. The question is, would they work?

In 1996, a group was formed at the Montana Agricultural Experiment Station, to implement these practices and study the results at the Bandy Research Ranch near Ovando.

Clayton said that they tried to target streambank and vegetation. They thought that if they could protect the streambank from trampling and keep the vegetation from being eaten down, that would probably improve the quality of the stream—take sediment out of the stream, reduce nitrates, phosphates, fecal coliform.

The history of the Bandy Research Ranch is that it was self-sufficient, and one of its two streams were listed as partially impaired due to agricultural practices. The ranch was privately owned until 1990, logged from the 20s to the 30s, and U of M and MSU took the operation over in 1991. It sits in a very strategic location between National Forest and privately owned forestland, the Bob Marshall Wilderness and the Blackfoot/Clearwater Game Range.

Clayton said that during the time Bandy owned the ranch, Cottonwood Creek was listed as partially impaired due to reduced flows from irrigation and to banks sloughing due to agricultural practices (including grazing) producing high sediment yields in the stream. The first listing was in 1972, and DEQ went back and reviewed it in 1979 and the listing stood. This is another big reason to put this demonstration on this ranch.

BMPs Applied:

1. Establish a deferred rotation grazing system on fescue rangeland.
2. Cooperative management lease on Blackfoot and Clearwater Game Range.
3. Reduce stocking rate in "timber" pasture (even though we doubled the number of cattle) by reducing the length of time they had access to this pasture.
4. Establish special use "riparian" pasture
5. Construct new heifer winter lot.

Robert Finck explained the results from the four-year monitoring effort, as shown below:

	FECAL	NITRATE	CHANNEL	TREND
Stocking rate	**+**	**none**	**+**	Improve
Relocate Lot	**-**	**+**	**-**	Degrade
Continuous	**-**	**-**	**-**	Loser
Riparian Pasture	**none**	**+**	**+**	Improve
Livestock Exclusion	**none**	**none**	**none**	Static

Conclusions:

During the demonstration, extenuating circumstances—such as numerous elk—may have reduced the apparent overall improvement in water quality. We have also come up with the following suggestions:

1. Identify problems to be corrected.
2. Include all users (State and Federal Agencies) within the watershed planning.
3. BMPs should be incorporated into the overall ranch plan.
4. Greatest improvement will probably be obtained by applying several BMPs –at the very least limit the use period to 30 days or less.

In spite of the limited success with the heifer lot removal, the overall ranch record of improved water quality led the Montana Department of Environmental Quality to remove the stream from the list of impaired streams in August 1999.

ANNOUNCEMENT:

Vicki Watson, from U of M, announced that the U of M will be writing a proposal concerning the Restoration Settlement Plan. They would like to provide scientific expertise to design a project and set up a long-term monitoring plan that will ensure the project(s) will accomplish the desired effect. She stressed that instead of each individual project having its own monitoring plan, we need a larger comprehensive plan—involving appropriate watershed groups such as this Steering Committee. They will write the proposal but would like the Committee's input.

Ole added the word "collaborate" to Vicki's description, saying that we use the words "cooperation," "coordination," and "communication" but "collaboration" implies it's more mandatory that agencies meet with each other and work together on these things.

Gerald would like to try and bring Carol Fox to the next meeting and get her input for this proposal. We will invite her to the next meeting, and then submit our comments to Vicki soon after that.

Vicki also invited the Steering Committee to attend the Clark Fork River Symposium held at the U of M in the Continuing Education Building on April 14 and 15.

STATE-AVISTA MEETINGS:

Jim Dinsmore briefly summed up what happened at the public forum held January 25, in Kalispell, which discussed the State Avista negotiations. He said over a hundred people showed up at the meeting, and several new issues were brought up.

One big issue was that many want ground water to be left alone—they do not want a closure, perhaps as a direct result of development.

A couple of people mentioned they thought agriculture should have a priority for water.

The chairman of the Conservation District at Flathead County said timber harvest was a problem, explaining that when you do not harvest timber or prevent fire you change watershed patterns.

The tribes were defensive also. The bottom line is they believe not only do they have a water right, but they own the water (not the State or Avista).

The issue of Hungry Horse Reservoir came up—there is a lot of water still there (but there are some claims to it). Somebody suggested they have representation from that basin involved in the negotiations.

Some commented that there should be no negotiation parties. The State shouldn't have granted the water right to Avista in the first place.

Jim said that this whole negotiation process has to be sold to the Legislature.

Steve Fry, Avista, said a lot of questions arose at the meeting. Should the State have given other water rights after they gave the water right to Avista? What happens to the water rights junior to Avista?

Jim mentioned there will be a couple of more preliminary meetings coming up in the future. Flathead has all sorts of controversy.

Ole asked if the committee could get a list of what transpired at the meeting. It is possible Mike McLane could write one up.

NEXT MEETING:

The next meeting has been **re-scheduled for March 2, 2000**, at 9:30 a.m. at St. Mary's Center in Deer Lodge. Possible topics for the next agenda include:

1. Work Plan
2. Vicki's proposal
3. Carol Fox (hopefully)
4. Leslie's model (from the Bureau of Reclamation)